

Patent  
Attorney Dkt. No.: LYNN/0096

IN THE DRAWINGS:

FIG. 1 has been amended to show the means for varying the desired heat load to the evaporator as a function of the present capacity of the compressor, unloading the compressor, varying the rotational speed of the compressor, controlling compressor capacity as a function of available power, unloading the compressor, cycling the compressor, determining the present capacity of the compressor, evacuating a low pressure reservoir during surplus power and controlling the feed water distribution. FIG. 1 has also been amended to include the additional material that was shown in FIG. 2.

FIG. 2 has been cancelled.

Patent  
Attorney Docket: LYNN/0096

### REMARKS

The drawings stand objected to under 37 CFR 1.83(a) because the drawings failed to show every feature of the invention specified in the claims. Applicant has amended FIG. 1 to include every feature of the invention specified in the claims. Applicant has cancelled FIG. 2. Applicant respectfully requests reconsideration and withdrawal of the objection.

Claims 3-27 stand rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. Particularly, the Examiner concluded that Applicant failed to disclose the method or apparatus for performing the processes recited in the claims. However, on page 17 of the Specification, Applicant provided an Example of a system that was tested by performing the claimed method. Specifically, Applicant disclosed an ice making machine having a variable speed motor capable of operating a 15 hp inverter grade motor across a speed range from zero to 1800 RPM. The compressor driven by this variable speed motor was identified as a Carrier Model 5F40, fitted with individual cylinder unloaders, auxiliary oil cooler, water cooled heads and suction and discharge valves. Further disclosed was that the refrigerant was R-22 and that the condensed refrigerant was held in a liquid receiver. An expansion valve was used to control the refrigerant flow into the evaporator and the expansion valve was a pressure controlled expansion valve that controlled the pressure in the evaporator.

Applicant further disclosed in the Example that a barrel type evaporator served as the primary evaporator and cold reservoir heat exchanger for the system and that the level of refrigerant within the evaporator was raised or lowered to effectively change the size (height) of the evaporator and therefore adjust the amount of chilled surface area available for generating ice. The Example further discloses that system parameters were adjusted such that the temperature of the liquid within the evaporator was maintained at approximately -15 °F.

Applicant further disclosed that the present capacity of the refrigeration system may be determined by measuring the temperature (and/or pressure) of the evaporator and the condenser system. (Specification, p. 10, ¶ 1). Applicant further disclosed that additional data, such as refrigerant level in the high side liquid receiver or in the evaporator, compressor RPM, system power

Patent  
Attorney Docket: LYNN/0096

input, line voltage, line current and line phase factor may also be used to determine the real time capacity of the system. *Id.*

Further disclosure by the Applicant provides a preferred refrigeration output control as having a controller, or central control station that is set for the desired amount of power to be consumed by the refrigeration system. The controller then limits the power (voltage and/or current) delivered to the motor and therefore the amount of power delivered to the compressor. (Specification, p. 10, ¶ 2) The level of the refrigerant in the evaporator, suction pressure, or discharge pressure may be used to maintain control of the water flow to an ice maker. *Id.*

Considering power consumption control of the refrigeration system, Applicant disclosed that the refrigeration may include a controller to monitor the grid power at an appropriate place and then reduce the capacity of the refrigeration system to maintain the quality of the electrical grid, e.g., preventing brownouts, large power factors, etc. (Specification, p. 8, ¶ 1). Applicant further disclosed that the power consumption of the refrigeration system may be reduced by adjusting the speed or torque of the compressor and further disclosed the equipment necessary to achieve this. (Specification, p. 8, ¶ 2). Applicant disclosed a preferred method of reducing the power consumption of the compressor as being to unload some of the compressor cylinders, as further disclosed and discussed in the Example discussed above. (Specification, p. 9, ¶ 2).

As provided in the MPEP § 2164.01, the test for enablement is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation. A patent need not teach, and preferably omits, what is well known in the art. *Id.* As long as the specification discloses at least one method for making and using the claimed invention that bears a reasonable correlation to the entire scope of the claim, then the enablement requirement of 35 U.S.C. 112 is satisfied. (MPEP, § 2164.01(b)).

Therefore, Applicant respectfully asserts that adequate disclosure was provided in the Specification to enable one having ordinary skill in the art to make and use the claimed invention. Reconsideration and withdrawal of the rejection is respectfully requested.

Claims 1-4, 12 and 25 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 2,319,130 issued to Hanson. Hanson discloses an air conditioning system having a

Patent  
Attorney Docket: LYNN/0096

compressor, evaporator and condenser that controls the surface area of the evaporator and further unloads the cylinders of the compressor. (Hanson, p. 1, col. 1, lines 38-45). The disclosed evaporator includes two sections so that one section can be isolated when the passenger carriage air temperature reaches a low setpoint. (Hanson, p. 3, col. 1, lines 5-17). When the one section is isolated with a solenoid valve, two of the four cylinders are unloaded. *Id.*

Hanson does not disclose controlling a temperature of the liquid refrigerant in the evaporator so that the effective surface area of the evaporator is maintained substantially at a set temperature, a limitation claimed by Applicant in amended claim 1.

MPEP § 2131 provides:

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference." *Verdegal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the . . . claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831 (Fed. Cir. 1990).

Because Hanson does not disclose each and every limitation claimed by Applicant, Applicant respectfully asserts that a *prima facie* case of anticipation has not been presented for Applicant's amended claim 1. Reconsideration and withdrawal of the rejection of claim 1, as well as for all dependent claims depending therefrom, is respectfully requested.

Claims 1-3 and 28 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,373,353 issued to Anzalone. Anzalone discloses an air conditioning system that throttles the refrigerant as it flows through some of the evaporator coils and allows the full flow through the remaining evaporator coils. (Anzalone, col. 2, lines 7-24). Anzalone does not disclose controlling a temperature of the liquid refrigerant in the evaporator so that the effective surface area of the evaporator is maintained substantially at a set temperature, a limitation claimed by Applicant in amended claim 1.

Because Anzalone does not disclose each and every limitation claimed by Applicant, Applicant respectfully asserts that a *prima facie* case of anticipation has not been presented for

Patent  
Attorney Docket: LYNN/0096

Applicant's amended claim 1. Reconsideration and withdrawal of the rejection of independent claim 1 is respectfully requested as well as for all other claims depending therefrom.

Claims 5-11, 13-17, 20-22 and 26 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hanson as applied to claim 1 above, and further in view of admitted prior art. Claims 18 and 19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hanson as applied to claim 1 above, and further in view of Hailey. Claim 27 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Hanson as applied to claim 1 above, and further in view of Trepaud. Claims 23 and 24 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hanson in view of admitted prior art as applied to claim 17 above, and further in view of Trepaud as applied to claim 27 above. For the reasons provided in the remarks above concerning amended independent claim 1, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 5-11, 13-19, 20-24 and 26-27 as depending, either directly or indirectly, from amended independent claim 1.

Regarding the Examiner's general statement regarding the rejection of the dependent claims 5-11, 13-17, 20-22 and 26 - that it is taken to be admitted prior art that the various means for controlling the compressor capacity recited in the claims are conventional in view of the lack of any disclosure of how to make and use said capacity control means (Office Action, p. 4) - Applicant respectfully traverses the general statement pursuant to the teachings of § 2144.03 of the MPEP. Furthermore, as the Federal Circuit Court has taught *In re Kotzab*, 217 F.3d 1365 (Fed. Cir. 2000):

Most, if not all inventions arise from a combination of old elements . . . Thus, every element of a claimed invention may often be found in the prior art. However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant.

*Id.* at 1395.

Therefore, even if some of Applicant's claimed limitations are found in the prior art, a *prima facie* case of obviousness still requires some motivation, suggestion or teaching of the desirability of

Patent  
Attorney Docket: LYNN/0096

making the specific combination that was made by Applicant.

Applicant respectfully asserts that all claims are now in condition for allowance and respectfully requests the timely issuance of a Notice of Allowance. If the Examiner believes that the examination of this pending application can be expedited by a telephone interview, the Examiner is invited to telephone the below signed attorney at the convenience of the Examiner. In the event there are additional charges in connection with the filing of this Response, the Commissioner is hereby authorized to charge the Deposit Account No. 50-0714/LYNN/0096 of the firm of the below-signed attorney in the amount of any necessary fee.

Respectfully submitted,



Frank J. Campigotto  
Attorney for Applicant  
Registration No. 48,130  
STREETS & STEELE  
13831 Northwest Freeway, Suite 355  
Houston, Texas 77040  
(713) 939-9444